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wild garlic

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CULAR 1109

wild

Figure 1

Figure 2

●1 A typical clump of wild garlic. (Photo courtesy of E. J. Peters, ARS, USDA.) ●2 The leaves of wild onion are flat and solid; those of wild garlic are round and hollow. (Photo courtesy of E. J. Peters, ARS, USDA.) ●3 In addition to the central bulb or main stem (B), wild garlic produces hard-shell bulbs (A), soft-shell bulbs (C), and aerial bulblets (D). ●4 Some hard-shell bulbs (left) remain dormant in the soil for 5 or 6 years. Most of the soft bulbs (right) grow within a year of two.

garlic

Figure 3

Figure 6

Figure 4

Control

- Plant wheat in garlic-free fields.
- Plow and begin cultivation of row crops early to prevent formation of new aerial bulblets.
- Obtain a vigorous stand of wheat with adequate seeding and fertilization.
- Use herbicides in the fall to control wild garlic in pastures and noncrop areas.
- Apply herbicides to wheat in the spring.
- Adjust the combine to remove as much wild garlic as possible.
- Dry wheat and clean again.

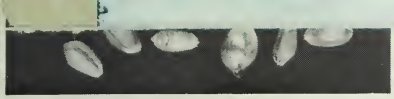

Figure 5

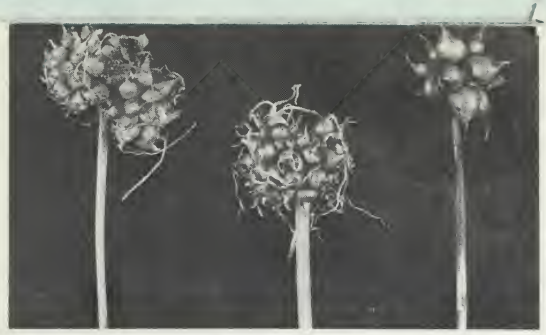

Figure 7

●5 Aerial bulblets of wild garlic are about the same size as wheat. They are the main reason for discounts. ●6 Wild garlic produces aerial bulblets in clusters. These mature at about the same time as wheat and are normally about the same height as the wheat heads. A single cluster may have as many as 300 bulblets. Bulblets fall to the soil and produce new plants. They are the major means by which wild garlic spreads; therefore, their control is very important. Some "heads" produce flowers and seeds in addition to the aerial bulblets (left). ●7 Wild garlic "heads" vary in size and shape. The "head" in the center is typical. The "head" on the left is double. The one on the right is smaller, but the individual bulblets are larger.

Figure 8

●8 Do not spray small grain before the plants have tillered (left); spray after the plants are well tillered and about 4 to 8 inches high (center). Do not spray after small-grain stems are jointing or producing nodes (right). ●9 As small grain approaches the boot stage, risk of injury from 2,4-D applications and subsequent loss in yield increase.

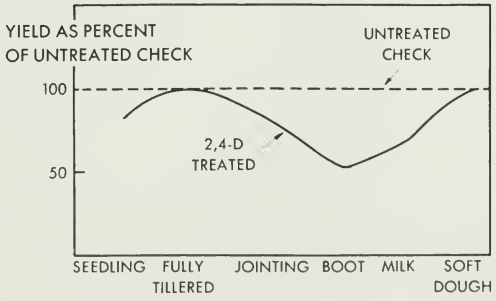

Figure 9

DON'T PANIC. Don't get mad at your elevator operator. He will gladly buy your wheat, but he doesn't want your wild garlic. Neither do millers, nor foreign buyers. To avoid garlic discounts, sell clean wheat.

The easiest way to produce a clean crop is to control wild garlic in the field. Cleaning garlic from wheat requires more time and effort, but can be profitable if garlic discounts are high.

Controlling Wild Garlic

To avoid a problem with wild garlic, try to plant wheat only on land that is relatively garlic-free. Where wild garlic is abundant, raising clean-tilled crops such as corn and soybeans for several years can reduce the wild garlic problem by preventing the formation of new aerial bulblets. Plowing helps to control garlic; however, plowing in July and August, when wild garlic is dormant, does little good. Begin cultivation of row crops early.

Obtaining a vigorous stand of wheat that is able to compete with wild garlic is important. You can encourage a vigorous stand with an adequate seeding rate and sufficient fertilizer.

Research indicates that applications of 2,4-D can help control wild garlic in grass pastures (no legumes), fencerows, and other noncrop areas. Applications should be made in November, when most of the garlic plants have emerged. One to two quarts of 2,4-D ester per acre (4 pounds acid equivalent per gallon) is suggested. Apply only in accordance with current label recommendations and U.S. Environmental Protection Agency regulations.

In the spring, 2,4-D can be applied to wheat when the plants are 4 to 8 inches high, after they have tillered, and before they "joint" or form nodes on the stem. One to 1½ pints of 2,4-D ester per acre (4 pounds acid equivalent per gallon) can reduce the formation of aerial bulblets and distort the wild garlic plants so that many of the bulblets will be missed in combining, if the combine is adjusted high enough and the wheat is not lodged.

Check current label directions for application rates and EPA registration. There is some risk of injury to wheat as the application rate increases. However, if 2,4-D is applied at approved rates at the proper time, the risk of injury is usually less than the risk from a severe wild garlic infestation.

Banvel (dicamba) alone, or in combination with 2,4-D, is usually at least as effective as 2,4-D alone. Refer to current labels for rates, timing, and crops to which Banvel can be applied.

Refer to herbicide labels for information on aerial application.

Cleaning Wheat

If you have wild garlic in wheat, check a sample yourself or take one to your elevator operator for an estimate of the number of wild garlic bulblets, before you begin to haul loads of wheat to the elevator.

Discounts are based on the number of wild garlic bulblets in a 1,000-gram sample (about 1 quart). If you are not willing to accept the discounts indicated, you can either use the wheat for feed or clean it.

Research suggests that garlicky wheat can be used in feed in limited amounts for most kinds of livestock and poultry with little or no ill effect on the animal or animal products.

Although some wild garlic bulblets are about the same size as wheat, many that are smaller or larger can be removed by cleaning. Try to clean wheat before storing. There can be some advantage to on-farm storage since it permits more flexibility in marketing.

The cleaning process begins with combining. Carefully adjust the combine to remove as many of the garlic bulblets as possible.

Use a dryer or store wheat for 6 to 8 months to allow remaining garlic bulblets to dry and shrink. Drying changes the size and density of the bublets so that more can be removed when the grain is cleaned a second time.

A second cleaning can be done with a fanning mill or other suitable equipment. Use two screens — one larger and one smaller than the wheat. Apply enough air to blow out material lighter than the wheat. If cleaning equipment isn't available, consider running the wheat through the combine a second time, after the grain is dry.

This circular was prepared by E. L. KNAKE, Professor of Weed Science, and M. D. McGLAMERY, Associate Professor of Weed Science.

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